National Foundation Phase Maths Olympiad - Grade1

Collection Editor:

The Association for Mathematics Education of South Africa - Kwa-Zulu Natal

National Foundation Phase Maths Olympiad - Grade1

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Online:
< http://cnx.org/content/col11229/1.1/ >

C O N N E X I O N S

Rice University, Houston, Texas

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Chapter 1

National Foundation Phase Maths Olympaid - Grade1[1]

1.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD

Figure 1.1

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[1] This content is available online at <http://cnx.org/content/m33457/1.1/>.

1.2 GRADE ONE - PILOT PAPER QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES TIME: 08:30-09:45 MARKS: 20

NAME OF LEARNER:____

NAME OF SCHOOL:____

1.3 INSTRUCTIONS TO LEARNERS:

1. You are expected to answer 15 questions.
2. These are multiple choice questions. Circle the correct answer.
3. Use blank pages for working. Circle the answer after you have done the working.
4. You are not allowed to use the calculator.
5. Read the question carefully before answering. Don't rush.
6. Your teacher will read the question to you.
7. First 10 questions – 1 mark each.
8. Questions 11-20: 2 marks each.

ENJOY THE OLYMPIAD

1.4 TEST QUESTIONS

Exercise 1.1

Count the number of circles in this arrangement.

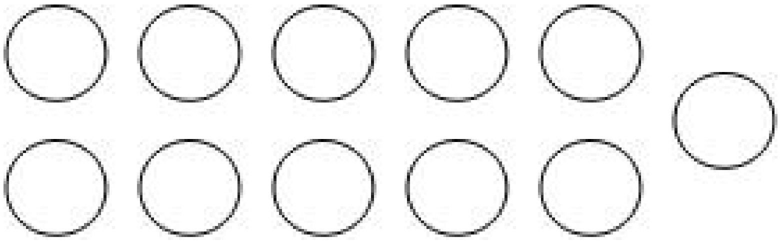

Figure 1.2

(A) 9 (B) 10 (C) 11

Exercise 1.2

Which number is the largest? 45; 54; 51 (A) 54 (B) 51 (C) 45

Exercise 1.3

Which number is out of order?24; 22; 26; 28 (A) 22 (B) 26 (C) 28

Exercise 1.4

Give the value of Φ in this addition problem.

	4	3
+	2	Φ
=	7	0

Table 1.1

Exercise 1.5
(A) 5 (B) 6 (C) 7

Exercise 1.6
Give the next number in this pretty pattern(adding 3) 9; 12; 15;……(A) 18 (B) 17 (C) 16

Exercise 1.7
Find the value of Φ in $24 + 6 = 20 + \Phi$

Exercise 1.8
Look at this pretty square: A coin Φ was placed at 7. It was moved two(2) places to the left; one(1) place down and one(1) place to the right. On which numbered square is the coin ? (A) 9 (B) 10 (C) 11

1	2	3	4
5	6	Φ7	8
9	10	11	12
13	14	15	16

Table 1.2

Exercise 1.9
How many blocks are there in this stack ?

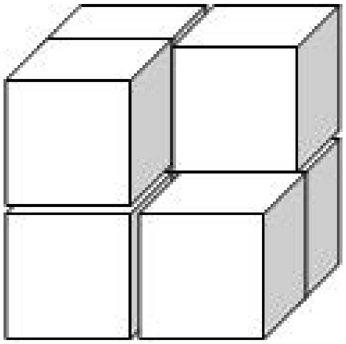

Figure 1.3

(A) 6 (B) 7 (C) 8

Exercise 1.10
Double the number 7 and take away 3 from the answer. What will the number now be ?(A) 11 (B) 12 (C) 13

Exercise 1.11

You are given 3 plastic number digits 2; 4 and 5. How many different 3 digit numbers can be made ?(A) 3 (B) 6 (C) 9

Exercise 1.12

After giving $\frac{1}{2}$ the number of health biscuits to her friends Patricia has 14 left. How many biscuits did Patricia start off with ? (A) 26 (B) 28 (C) 30

Exercise 1.13

Sipho had to take 5ml. of medicine in the morning, midday and in the afternoon (3 times per day). How much of medicine did Sipho take in 5 days ?(A) 75ml (B) 60ml (C) 45ml

Exercise 1.14

Lesley saw the time on the clock. What time will it be in 10 hours time ? (A) 1 o' clock (B) 2 o' clock (C) 3 o' clock

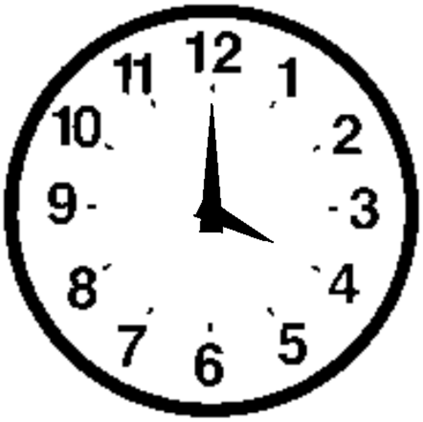

Figure 1.4

Exercise 1.15

If $296 + 194 = 490$ then what is the answer to $296 + 174$?(A) 480 (B) 470 (C) 460

Exercise 1.16

Pam makes 1 paper jet every 5 minutes. Tweedie makes 2 paper jets every 15 minutes. They continue to work like this. If they made 60 paper jets then how many paper Jets did Tweedie make ?(A) 20 (B) 30 (C) 40

Chapter 2

National Foundation Phase Maths Olympiad - Answer sheet template[1]

2.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD

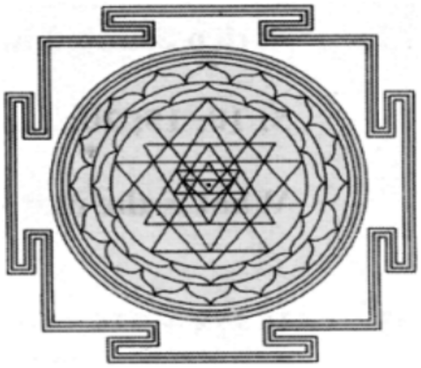

Figure 2.1

ANSWER SHEET

NAME OF LEARNER:_ _

GRADE:_ _ _ _ _ _ _ _ _

Circle the correct answer after doing your working.

---

[1] This content is available online at <http://cnx.org/content/m35678/1.1/>.

1		A	B	C
2		A	B	C
3		A	B	C
4		A	B	C
5		A	B	C
6		A	B	C
7		A	B	C
8		A	B	C
9		A	B	C
10		A	B	C
11		A	B	C
12		A	B	C
13		A	B	C
14		A	B	C
15		A	B	C

Table 2.1

MARKS: Numbers 1-10: 10 x 1 = 10
Numbers 11-15 : 5 x 2 = 10 (TOTAL: 20)

Chapter 3

National Foundation Phase Maths Olympiad - Grade one - final round - 2006[1]

3.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD

Figure 3.1

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[1] This content is available online at <http://cnx.org/content/m35669/1.1/>.

3.2 GRADE ONE – FINAL ROUND PAPER: 2006 QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES
MARKS: 20
NAME OF LEARNER:____
NAME OF SCHOOL:____

3.3 INSTRUCTIONS TO LEARNERS:

1. You are expected to answer 15 questions.
2. These are multiple choice questions. Circle the correct answer.
3. Use blank pages for working. Circle the answer after you have done the working.
4. You are not allowed to use the calculator.
5. Read the question carefully before answering. Don't rush.
6. Your teacher will read the question to you.
7. First 10 questions – 1 mark each.
8. Questions 11-20: 2 marks each.

ENJOY THE OLYMPIAD

3.4 Test Questions:

3.4.1 Exercise 1

How many circles are there in this arrangement?

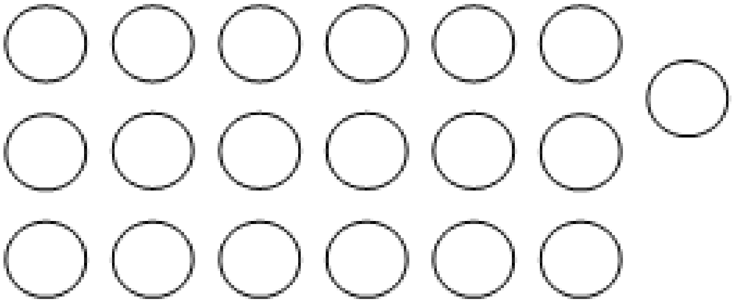

Figure 3.2

3.4.2 Exercise 2

Which number is the smallest?
73; 69 or 86

3.4.3 Exercise 3

Write down the number which is 7 less than 30.

3.4.4 Exercise 4

Give the value of □ in this addition problem:

$$\begin{array}{r} 6\ \ 4 \\ +\ \square\ \square \\ \hline 1\ 5\ 2 \\ \hline \end{array}$$

Figure 3.3

3.4.5 Exercise 5

Give the next number in this pattern:
6; 11; 16; 21....

3.4.6 Exercise 6

Find the value of Δ:

$$36 = \Delta + \Delta + \Delta \tag{3.1}$$

3.4.7 Exercise 7

Teaser counted in 5's as follows:
5; 10; 15; 20; 25....
What is the 12th number counted by Teaser?

3.4.8 Exercise 8

How many blocks are there in this stack?

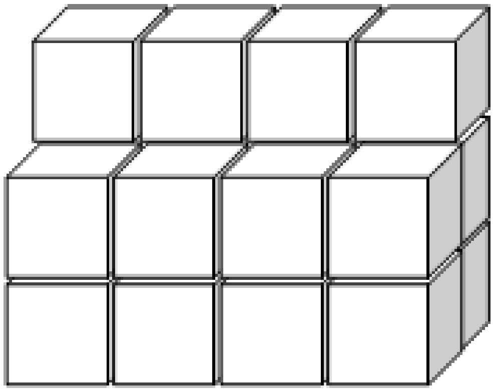

Figure 3.4

3.4.9 Exercise 9

3 energy bars cost R20. How many energy bars could you get for R80?

3.4.10 Exercise 10

At a supermarket you could buy 5 pencils for the same price as 3 pens. Deon bought 15 pens. How many pencils could he have gotten for the same price?

3.4.11 Exercise 11

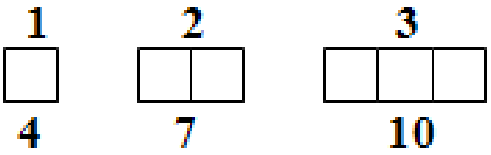

Figure 3.5

4 matchsticks are used to make 1 square. 7 matchsticks are used to make 2 squares. 10 matchsticks are used to make 3 squares. How many matchsticks are used to make the 10th figure?

3.4.12 Exercise 12

Mandy has 2 secret numbers in two envelopes. When she added the 2 numbers she got 10. When she double the first number and added it to the second number she got 17. What is the smaller secret number?

3.4.13 Exercise 13

A taxi makes 3 stops each time in one round trip. If the taxi made 73 stops in one week and started at A, what is the last stop?

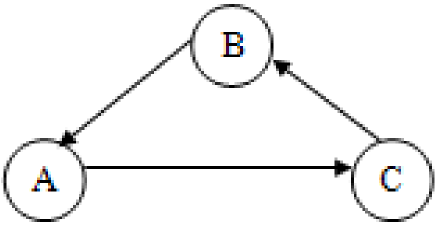

Figure 3.6

3.4.14 Exercise 14

Four friends live on the same straight road. Wendy lives to the right of Larry. Pam lives to the right of Larry. Wendy lives to the right of Pam. Princess lives to the right of Wendy. Who lives between Pam and Princess ?

3.4.15 Exercise 15

Two red beads are placed between every two blue beads. There are 20 blue beads. After looking at the arrangement below work out the number of red beads.

B R R B R R B R R B . . .

Chapter 4

National Foundation Phase Maths Olympiad - Grade one - final round- 2007[1]

4.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD

Figure 4.1

4.2 GRADE ONE – FINAL ROUND PAPER: 2007 QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES

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[1] This content is available online at <http://cnx.org/content/m35675/1.1/>.

MARKS: 20
NAME OF LEARNER:____
NAME OF SCHOOL:____

4.3 INSTRUCTIONS TO LEARNERS:

1. You are expected to answer 15 questions.
2. Use the answer booklet for your answers.
3. Use the space provided for your working.
4. You are not allowed to use the calculator.
5. Read the question carefully before answering. Don't rush.
6. Your teacher will read the question to you.
7. First 10 questions – 1 mark each.
8. Questions 11-20: 2 marks each.

4.4 Test Questions:

4.4.1 Exercise 1

How many circles are there in this arrangement?

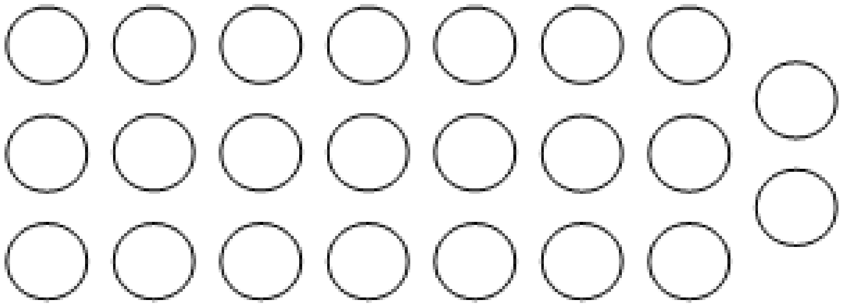

Figure 4.2

4.4.2 Exercise 2

Which number is 2 less than 71?
73; 69; 86

4.4.3 Exercise 3

Write down the number which is 9 more than 38.

4.4.4 Exercise 4

Give the value of Δ in this addition problem:

$$\begin{array}{r} 7\ 9 \\ +\ \Delta\ \Delta \\ \hline 1\ 2\ 3 \\ \hline \end{array}$$

Figure 4.3

4.4.5 Exercise 5

Give the next number in this pattern.

13; 18; 23; 28;……

4.4.6 Exercise 6

Find the value of Δ:

$$48 = \Delta + \Delta + \Delta \tag{4.1}$$

4.4.7 Exercise 7

Nellie counted in 5's as follows:-

5; 10; 15; 20; 25; . . .

Write down the units digit of the 20^{th} number.

4.4.8 Exercise 8

How many blocks are there in this stack?

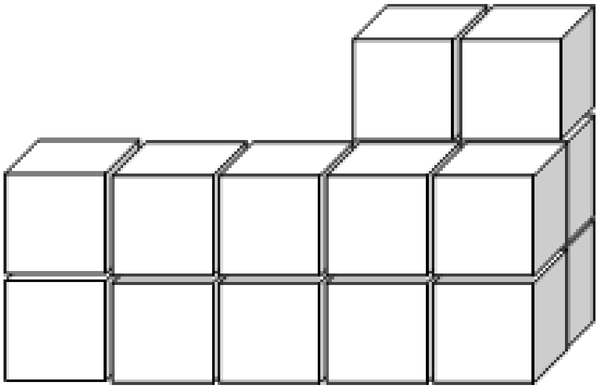

Figure 4.4

4.4.9 Exercise 9

5 cans energy drinks cost R16. How many cans energy drinks could you get for R48 ?

4.4.10 Exercise 10

At a superstore you could get 2 CD's free for every 5 CD's bought. Jerrico received 10 free CD's. How many CD's did Jerrico pay for?

4.4.11 Exercise 11

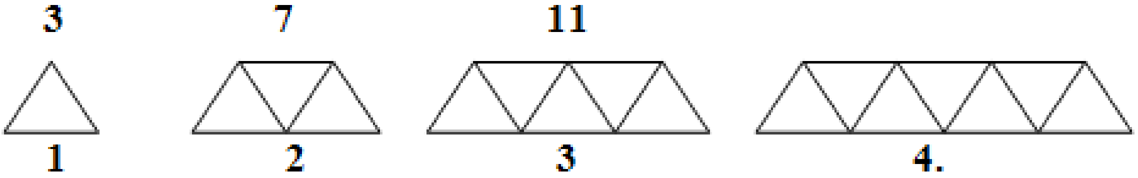

Figure 4.5

3 matchsticks are used to make 1 triangle. 7 matchsticks are used to make 3 triangles. 11 matchsticks are used to make 5 triangles. How many matchsticks are used to make the 11 triangles?

4.4.12 Exercise 12

When Cindy added two numbers the answer was 30.When she double one number and added this to the other number the answer was 42. Write down the larger number.

4.4.13 Exercise 13

When Pretty counted her dolls in 2's she had A left. When she counted her dolls in 3's she had none left. What is the smallest number of dolls Pretty counted?

4.4.14 Exercise 14

Tina was given 5 less health sweets than Sipho. Dineo was given 5 more health sweets than Sipho. All three had 42 health sweets. How many health sweets did Dineo have ?

4.4.15 Exercise 15

Three red beads are placed between every two blue beads. There are 16 blue beads. After looking at the arrangement below work out the number of red beads.

B R R R B R R R B R R R B . . .

Chapter 5

National Foundation Phase Maths Olympiad - Grade one - round 1 - 2006[1]

5.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD

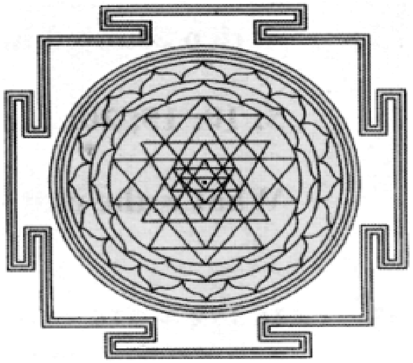

Figure 5.1

5.2 ROUND ONE PAPER: 2006 QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES
MARKS: 20
NAME OF LEARNER:____
NAME OF SCHOOL:____

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[1] This content is available online at <http://cnx.org/content/m35667/1.1/>.

5.3 INSTRUCTIONS TO LEARNERS:

1. You are expected to answer 15 questions.
2. These are multiple choice questions. Circle the correct answer.
3. Use blank pages for working. Circle the answer after you have done the working.
4. You are not allowed to use the calculator.
5. Read the question carefully before answering. Don't rush.
6. Your teacher will read the question to you.
7. First 10 questions – 1 mark each.
8. Questions 11-20: 2 marks each.

ENJOY THE OLYMPIAD!

5.4 Test Questions:

5.4.1 Exercise 1

Count the number of circles in this arrangement.

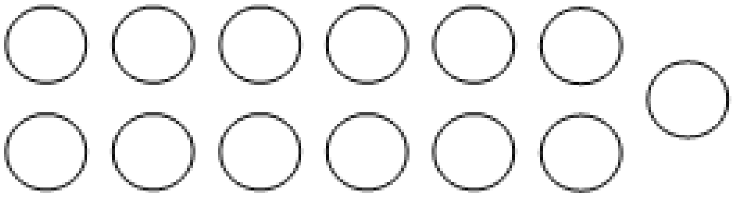


Figure 5.2

(A) 11 (B) 12 (C) 13

5.4.2 Exercise 2

Which number is the largest ? 56; 65; 57
(A) 65 (B) 56 (C) 57

5.4.3 Exercise 3

Which number is out of order ? 12; 16; 14; 18
(A) 14 (B) 16 (C) 18

5.4.4 Exercise 4

Give the value of Δ in this addition problem.

$$\begin{array}{rcc} & 5 & 6 \\ + & 2 & \triangle \\ \hline & 8 & 0 \\ \hline \end{array}$$

Figure 5.3

(A) 2 (B) 4 (C) 6

5.4.5 Exercise 5

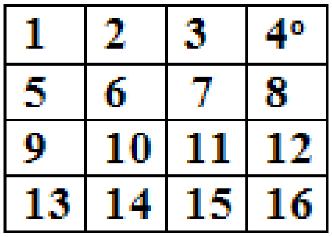
Give the next number in this pattern(adding 4) 5; 9; 13; 17;......
(A) 21 (B) 20 (C) 19

5.4.6 Exercise 6

Find the value of Δ : $36 + 4 = 30 + \Delta$
(A) 5 (B) 10 (C) 15

5.4.7 Exercise 7

Look at this pretty square



1	2	3	4°
5	6	7	8
9	10	11	12
13	14	15	16

Figure 5.4

A coin was placed at 4. It was moved three(3) places to the left; two(2) places down and one(1) place to the right. On which numbered square is the coin?
(A) 9 (B) 10 (C) 11

5.4.8 Exercise 8

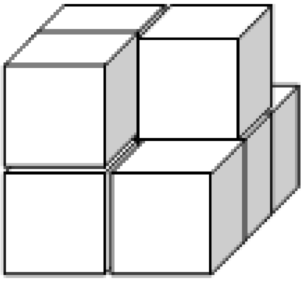


Figure 5.5

How many blocks are there in this stack ?
(A) 9 (B) 10 (C) 11

5.4.9 Exercise 9

Double the number '8' and take away 5 from the answer. What will the number now be ?
(A) 10 (B) 11 (C) 12

5.4.10 Exercise 10

You are given 3 plastic number digits 2; 4 and 5 . How many different 2 digit numbers can be made ?
(A) 3 (B) 6 (C) 9

5.4.11 Exercise 11

After giving $\frac{1}{2}$ the number of health biscuits to her friends Patricia has 16 left. How many biscuits did Patricia start off with ?
(A) 28 (B) 30 (C) 32

5.4.12 Exercise 12

Sipho had to take 5ml of medicine in the morning, at midday and in the afternoon (3 times per day). How much of medicine did Sipho take in 14 days ?
(A) 150ml (B) 140ml (C) 100ml

5.4.13 Exercise 13

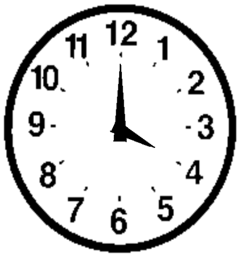


Figure 5.6

Lesley saw the time on the clock. What was the time 10 hours ago ?
(A) 5 o' clock (B) 6 o' clock (C) 7 o' clock

5.4.14 Exercise 14

If 454 + 532 = 986 then what is the answer to 464 + 522?
(A) 986 (B) 976 (C) 966

5.4.15 Exercise 15

Pam makes 2 paper jet every 5 minutes. Tweedie makes 3 paper jets every 15 minutes. They continue to work like this. How many paper jets will both make in 1 hour ?
(A) 30 (B) 36 (C) 42

Chapter 6

National Foundation Phase Maths Olympiad - Grade one - round 1 - 2007[1]

6.1 INSTITUTE FOR ADVANCEMENT OF MATHEMATICS AND SCIENCE (IAMS) NATIONAL FOUNDATION PHASE MATHEMATICS OLYMPIAD

Figure 6.1

6.2 GRADE ONE – ROUND ONE PAPER: 2007 QUESTION BOOKLET

DURATION: 1 HOUR 15 MINUTES
MARKS: 20
NAME OF LEARNER:_______________________________________
NAME OF SCHOOL:_______________________________________

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[1] This content is available online at <http://cnx.org/content/m35672/1.1/>.

6.3 INSTRUCTIONS TO LEARNERS:

1. You are expected to answer 15 questions.
2. These are multiple choice questions. Circle the correct answer.
3. Use blank pages for working. Circle the answer after you have done the working.
4. You are not allowed to use the calculator.
5. Read the question carefully before answering. Don't rush.
6. Your teacher will read the question to you.
7. First 10 questions – 1 mark each.
8. Questions 11-20: 2 marks each.

ENJOY THE OLYMPIAD

6.4 Test Questions:

6.4.1 Exercise 1

Count the number of circles in this arrangement:

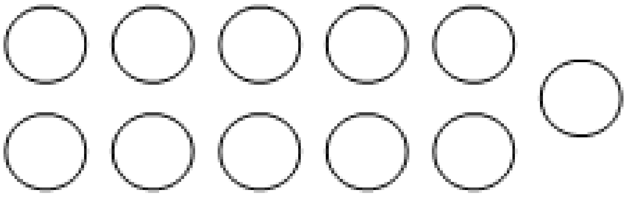


Figure 6.2

(A) 9 (B) 11 (C) 13

6.4.2 Exercise 2

Which number is the smallest?
78; 69; 96
(A) 78 (B) 96 (C) 69

6.4.3 Exercise 3

Which number is out of order?
22; 24; 28; 26; 30
(A) 24 (B) 26 (C) 28

6.4.4 Exercise 4

Give the value of Δ in this addition problem:

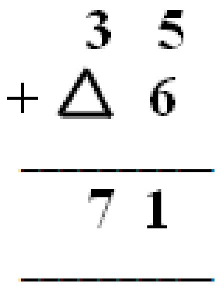


Figure 6.3

(A) 4 (B) 3 (C) 2

6.4.5 Exercise 5

Give the next number in this pattern(adding 5)
7; 12; 17; 22;. . .. . .
(A) 27 (B) 32 (C) 37

6.4.6 Exercise 6

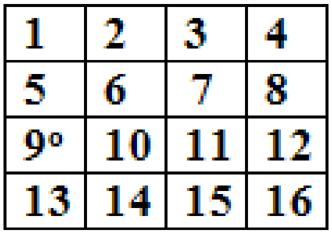
Find the value of Δ:

$$53 + \Delta = 45 + 15 \tag{6.1}$$

(A) 3 (B) 5 (C) 7

6.4.7 Exercise 7

Look at this pretty square:



1	2	3	4
5	6	7	8
9°	10	11	12
13	14	15	16

Figure 6.4

A coin was placed at 9. It was moved two(2) places to the right; two(2) places upward and one(1) place to the left. On which numbered square is the coin?
(A) 1 (B) 2 (C) 5

6.4.8 Exercise 8

How many blocks are there in this stack?

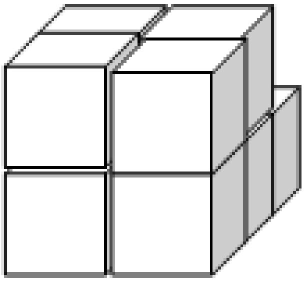


Figure 6.5

(A) 8 (B) 9 (C) 11

6.4.9 Exercise 9

Treble the number '6' and take away 4 from the answer. What will the number now be?
(A) 10 (B) 12 (C) 14

6.4.10 Exercise 10

You are given 3 plastic number digits 3, 5 and 7. How many different 3 digit numbers can be made?
(A) 5 (B) 6 (C) 7

6.4.11 Exercise 11

After giving 12 health biscuits to her friends Pam had $\frac{1}{2}$ the number of health biscuits left. How many health biscuits did Pam start off with?
(A) 6 (B) 18 (C) 24

6.4.12 Exercise 12

Senzo had to take 5ml of medicine in the morning and in the afternoon (2 times per day). How much of medicine did Senzo take in 14 days ?
(A) 120 ml (B) 140 ml (C) 160 ml

6.4.13 Exercise 13

Tammy saw the time on the clock. What will the time be in 15 hours?

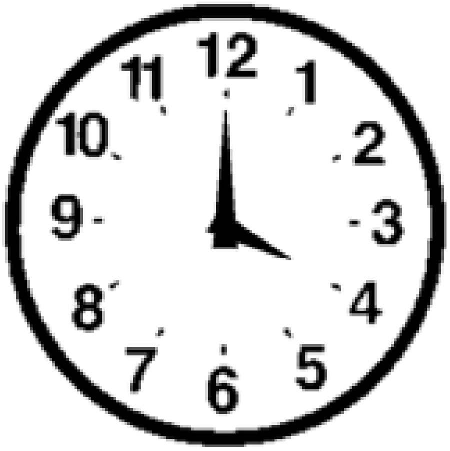


Figure 6.6

(A) 7 o'clock (B) 8 o'clock (C) 9 o'clock

6.4.14 Exercise 14

If 396 + 284 = 680 then what is the answer to:
386 + 274
(A) 640 (B) 650 (C) 660

6.4.15 Exercise 15

Penny makes 2 boxes every 7 minutes. Tootsie makes 3 boxes every 21 minutes. They continue to work like this. How many boxes will both make in 63 minutes ?
(A) 26 (B) 27 (C) 28

Index of Keywords and Terms

Keywords are listed by the section with that keyword (page numbers are in parentheses). Keywords do not necessarily appear in the text of the page. They are merely associated with that section. *Ex.* apples, § 1.1 (1) **Terms** are referenced by the page they appear on. *Ex.* apples, 1

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